

P O. Box 421
Eureka, Utah 84628
(801) 433-6804
FAX (801) 433-6803

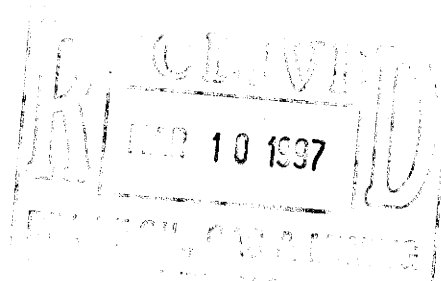
1023/007
PLS FILE



North Lily Mining Company

March 5, 1997

State of Utah
Department of Environmental Quality
Division of Water Quality
288 north 1460 West
Salt Lake City, Utah 84114-4870



RE: Addendum to Closure Plan submitted September 26, 1996

Attention: Mr. Dennis Fredrick
Ground Water Protection Section

Attached is Addendum I to Section 7.0 Fluid Deposal Plan of North Lily's Closure Plan submitted September 26, 1996. Addendum I is a proposal requesting that excess fluids from the heap flushing process be disposed of by land application and is submitted for your consideration.

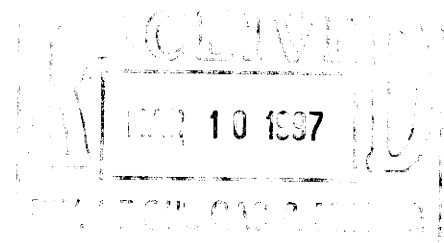
We, (Messrs. Webb, Gast and myself) will be available to discuss with you this and other phases of North Lily's Closure Plan at your convenience.

Sincerely,

Paul C. Spor
General Manager

cc Larry J. Mize, Manager, Ground Water Protection Section
Tom Munson, Division of Oil, Gas, and Mining
Roger Foisy, District Engineer, Central Utah District Health Dept.
David Rupp, Division of Water Quality
Tom Gast, Environmental Management Service Company
W. G. Webb, Executive Vice President, North Lily Mining Company
John Brown, Director, International Mahogany, Inc. (50% project participant)

0004



**SILVER CITY OPERATIONS
ADDENDUM I TO SECTION 7
FLUID DISPOSAL PLAN
HEAP CLOSURE PLAN**

**Prepared By:
NORTH LILY MINING COMPANY
1800 Glenarm Place, Suite 210
Denver, CO 80202
(303) 294-0427
FAX (303) 293-2235**

**Prepared For:
Department of Environmental Quality
Division of Water Quality
288 North 1460 West
Salt Lake City, UT 84114-4870
(801) 538-6146
FAX (801) 538-6016**

MARCH 1997

ADDENDUM I

7.0 FLUID DISPOSAL PLAN

It is planned that excess fluids from the heap flushing process will be deposited of by land application. This system of fluid disposal is well proven. The most significant benefit of direct land application relates to soil attenuation of metals and not the evaporation of solution. The land application system would be operated in a manner to exclude overland flow and maximize infiltration and percolation of solution into the soils.

In addition to the possibility of applying excess rinse solution to the seeded heap for irrigation, the operator has identified two potential areas for application in close proximity to the Silver City heap. Both areas are private and controlled by North Lily. (These areas are identified on Figure 1.) Soil samples were collected from both areas (See Figure 1 for sample locations) and submitted to the Colorado State University Soils Lab for analysis. (Results of the soil analysis are show as Figure 2.) All soils showed substantial capacity to absorb metals without exceeding concentrations considered harmful to plant growth.

Rinse solution concentration has been monitored for the past three and a half years. Spillway samples and been taken and submitted to ChemTech a Utah Certified Lab for analysis. The following table outlines the progress to date on some of the metals and cyanide (all analysis are reported in mg/l):

PARAMETER	*GROUND WATER	DETECTED IN								
	QUALITY STANDARD	JUL 93	MAR 95	JUN 95	SEP 95	DEC 95	MAR 96	JUN 96	SEP 96	DEC 96
Fluoride as F	2.4	1.60	2.49	4.94	5.2	5.7	3.5	5.9	1.6	5.4
Arsenic as As	0.05	0.916	0.604	0.59	0.814	0.500	1.3	0.63	0.44	0.31
Barium as Ba	2.0	<1	0.016	0.018	0.02	<0.20	<0.05	0.02	0.02	<0.2
Cadmium as Cd	0.005	<1	<.001	<.001	<0.01	<0.05	<0.025	<0.02	0.008	<0.1
Chromium as Cr	0.1	<1	<.01	<.007	<0.01	<0.05	<0.025	0.041	0.040	<0.1
Copper as Cu	1.3	1110	340	283	255	188	162	161	102	80.2
Lead as Pb	0.015	<2	0.088	0.066	0.100	0.100	<0.04	0.14	0.11	1.3
*Mercury as Hg	0.002	0.141	0.388	0.0020	0.232	0.329	0.39	0.40	0.27	0.31
Selenium as Se	0.05	0.529	0.140	0.24	0.17	0.024	0.03	<0.02	0.02	0.05
Silver as Ag	0.05	4.41	3.61	1.8	4.24	3.43	0.56	1.32	7.74	<0.1
Zinc As Zn	5.0	0.381	0.093	0.500	0.19	0.20	0.08	0.30	0.35	<0.2
Cyanide as CN-T	0.75	1480	344	256	300	*NOTE	163	149	91	62
Cyanide as CN-Wad	0.20	1264	77.6	239	291	169	153	156	93	64
pH	6.5 to 8.5	10.0	9.41	8.82	9.31	8.95	9.39	9.20	8.6	8.7

* Administrative Rules For Ground Water Quality Protection - Effective Date of Last Revision - March 20, 1995

* Digested analyzed by AWAL

As the above table indicates, the effluent coming from off the heap leach pads showed significant reductions in metals and total and wad cyanide levels for the past three years. North Lily is extremely pleased with the decrease in wad and total cyanide levels.

The amount of excess fluid that is planned for deposal by land application is estimated at 1,250,000

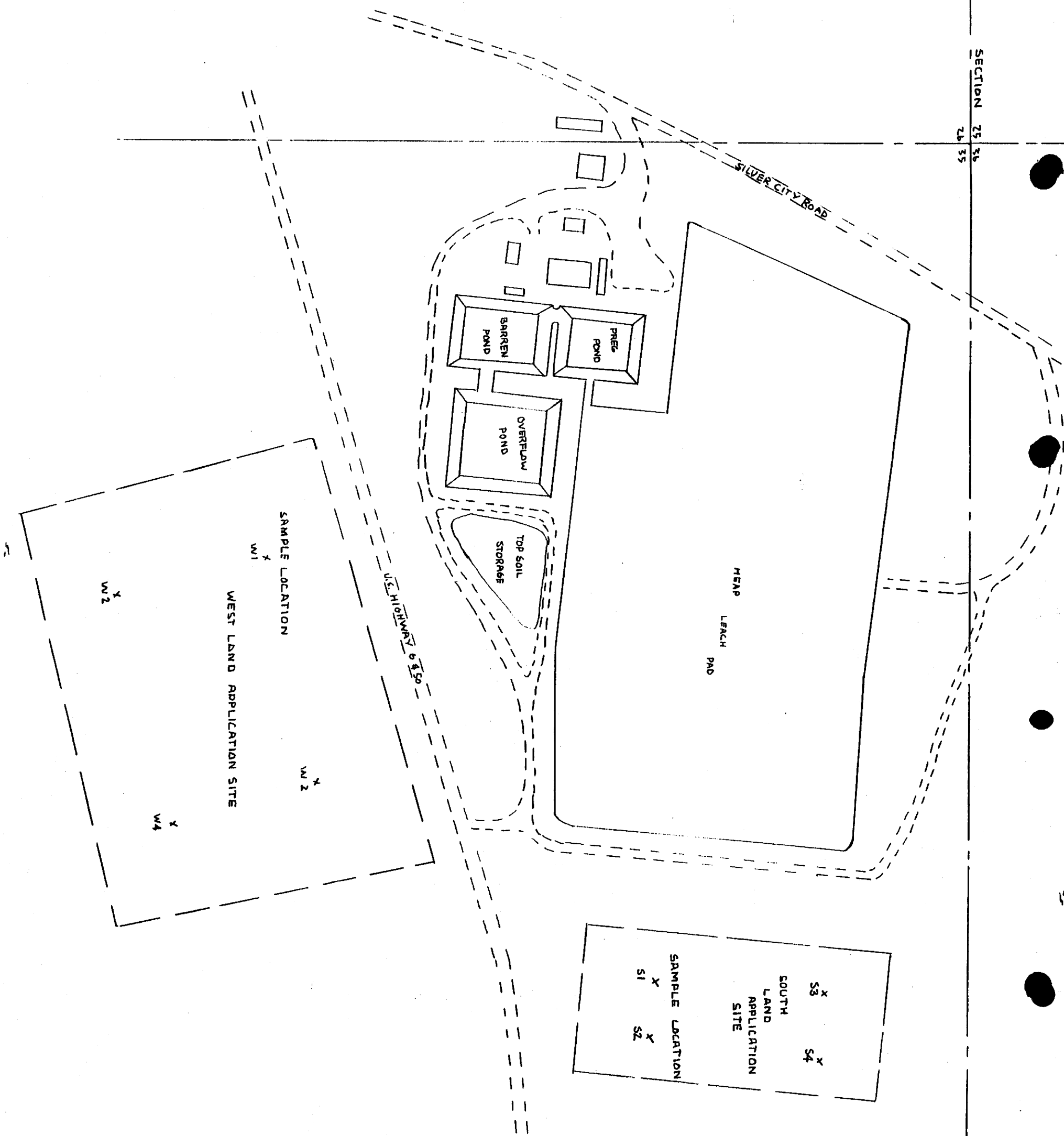
to 1,500,000 gallons or between 4 and 5 acre feet. These fluids will be deposited of on two sites; The first site is south of the heap leach pad and covers an area of approximately 180,000 sq ft or 4.13 acres, and the second site is west of the heap leach pad and across the highway and covers an area of approximately 360,000 sq ft or 8.26 acres. For a combined area of approximately 540,000 sq ft or 12.39 acres. If 250,000 gallons of excess fluid were evenly deposited of over the proposed sites less than one half gallon of fluid would be deposited of per square foot of ground.

Based on the following deposal rate, 100 gallons per minute for 8 hours per day a total of 48,000 gallons would be deposited per day. By alternating daily between sites 1 and 2 the excess fluids would be deposited of in approximately 31 days. (Note: Because site 2 is twice the size of site 1, it will be divided into two parcels thus each site of approximately 4.1 acres would receive excess fluid once every third day allowing for absorption and/or evaporation.) Deposal of excess fluids will not commence until the ground is free of snow and then only on days when temperatures are above 50 degrees Fahrenheit. On all rainy days, deposal of excess fluids will be suspended.

Based on the maximum amount of excess fluids estimated in the system the following amounts of metal, wad and total cyanide have been calculated to represent the total elements and compounds to be deposited of by land application (December 1996 rinse solution concentration levels were used). The following table outlines the projected results (Most of the soil analysis are reported in ppm calcium, magnesium, and sodium are reported in meq/l, all of the rinse solution values are reported as (Total amounts) in mg/l and the final column represents mg/kg in the 12.39 acres designated in site 1 and 2.):

PARAMETER	CURRENT SOIL LEVEL METALS/COMPOUNDS	DETECTED IN RINSE SOLUTION DEC 96	TOTAL mg/kg IN LAND APPLICATION AREA
Fluoride as F	N/R	5.4	1.12
Arsenic as As	0.69	0.31	0.06
Barium as Ba	N/R	<0.2	<0.04
Cadmium as Cd	0.09	<0.1	<0.02
Chromium as Cr	N/R	<0.1	<0.02
Copper as Cu	4.4	80.2	16.7
Lead as Pb	12.0	1.3	0.3
*Mercury as Hg	N/R	0.31	0.06
Selenium as Se	N/R	0.05	0.01
Silver as Ag	N/R	<0.1	<0.02
Zinc As Zn	1.59	<0.2	<0.04
Cyanide as CN-T	N/R	62	12.94
Cyanide as CN-Wad	N/R	64	13.36
pH	8.0	8.7	8.3
Phosphorus as P	4.4	0.13	0.03
Potassium as K	308	363	76
Iron as Fe	3.25	0.6	0.13
Manganese as Mn	1.9	0.188	0.04
Calcium as Ca	2.4	524	109.4
Magnesium as Mg	0.6	12	2.5
Sodium as Na	0.4	6710	1400

Although several of these elements will show higher than back ground levels of concentrations in the land application areas none of the elements are harmful to plant life. Within several years most of the soil in the land application area will return to its natural state.



LAND APPLICATION SITE MAP
NORTH LILY MINING COMPANY
SCALE: (APPROXIMATE) 1" = 200'
DATE: MARCH 1997
BY: PAUL SPOR
FIGURE 1

Tom Cast Environmental Management Services Company
301 Research Boulevard, Suite 103
Fort Collins, CO 80526

Colorado State University
Soil, Water and Plant Testing Laboratory
Natural & Environmental Sciences Bldg - A319
Fort Collins, CO 80523

DATE RECEIVED: 07-12-96

DATE REPORTED: 08-02-96

(970) 491-5061 FAX: 491-2930

BILLING:

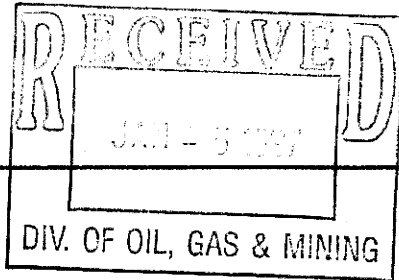
RESEARCH SOIL ANALYSIS

Lab #	Sample ID #	paste		Lime estimate	OM %	AB-DTPA					Texture estimate			
		pH	EC mhos/cm			NO ₃ -N	P	K	Zn	Fe		Mn	Cu	

Lab #	Sample ID #	Ca	Mg mcq/l	Na	K	SAR	Cd	Pb	As
R157	W1	2.6	1.0	0.5	0.1	0.4	0.06	3.1	1.32
158	W2	2.7	0.8	0.6	0.2	0.5	0.11	10.3	0.50
159	W3	2.2	1.0	0.3	0.1	0.3	0.08	6.1	0.58
160	W3	2.3	0.8	0.4	0.2	0.3	0.07	3.4	0.50
161	S1	2.4	0.3	0.3	0.1	0.2	0.09	22.7	0.95
162	S2	2.2	0.3	0.4	0.1	0.4	0.09	16.0	0.83
163	S3	2.3	0.3	0.4	0.1	0.4	0.14	24.5	0.29
164	S4	2.4	0.3	0.4	0.1	0.4	0.07	9.6	0.56

Figure 2

P O. Box 421
Eureka, Utah 84628
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M023007
PLS FILE



North Lily Mining Company

January 9, 1997

State of Utah
Attn: Compliance and Monitoring Program
Division of Water Quality
288 North 1460 West
P.O. Box 144870
Salt Lake City, Utah 84114-4780

RE: Forth Quarter Monitoring Report 1996

Dear Compliance and Monitoring Personnel:

In compliance with Part II of the Ground Water Discharge Permit No. 23000 issued to North Lily Mining Company in May 1991 and extended in August 1996, please find enclosed:

1. Pad and pond sump logs for the forth quarter of 1996
2. Well water analysis for forth quarter of 1996
3. Spillway sample for the forth quarter 1996

Values reported on the sump logs ie. - sodium cyanide levels are reported in parts per million, and the gallons, represent gallons in a 24 hour period.

The pad and pond sumps continue to be checked on a regular basis, but due to the reduced volume of solution in the system detectable levels are not often found. Only on days when solutions have been pumped from a sump are they recorded.

A well water sample was delivered to Chemtec, a Utah certified laboratory, on December 9, 1996 for analysis with a request that the water be analyzed per the specification required by the Division of Water Quality.

A spillway sample was taken to monitor the reduction of metals and cyanide in the solution coming off the heap leach pads. This has been done to enable North Lily to better meet and comply with state and federal water quality standards. The following table outlines the progress to date on some of the metals and cyanide (all analysis are reported in mg/l):

Page 2 Forth Quarter Monitoring Report 1996

PARAMETER	*GROUND WATER QUALITY STANDARD	DETECTED IN								
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* Administrative Rules For Ground Water Quality Protection - Effective Date of Last Revision - March 20, 1995

* Digested analyzed by AWAL

As the above table indicates, the effluent coming from off the heap leach pads showed significant reductions in several metals and total and wad cyanide levels for the last few quarters. *North Lily is extremely pleased with the decrease in wad and total cyanide levels reported this quarter. This is significant because during the forth quarter the heap leach pads were being regraded and contoured. Great quantity of rain and snow were received during this reclamation, rinsing the pads thoroughly. The decrease of total and wad cyanide levels indicate that rinsing of the heap leach pads over the past three years has been effective and that no significant pockets of cyanide remain in the heap.* The following table show the amounts of moisture received this quarter (amounts are reported in inches):.

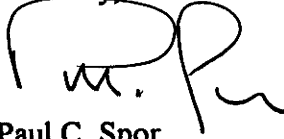
PRECIPITATION LOG

<u>DATE</u>	<u>MOISTURE AS RAIN</u>	<u>MOISTURE AS SNOW</u>
October	0.36	11.00
November	5.71	13.00
December	0.75	13.75
TOTAL	6.82	37.75

If you have questions and/or comments concerning this letter please contact Paul Spor at 801-634-1584.

Page 3 Forth Quarter Monitoring Report 1996

Sincerely,

A handwritten signature in black ink, appearing to be 'P. C. Spor', written over a horizontal line.

Paul C. Spor
General Manager

cc: Roger A. Foisy, Division of Water Quality
Tom Munson, Division of Oil, Gas, and Mining
Tom Gast, Environmental Management Services